

**WHAT IS CLAIMED IS:**

1. A display system comprising:
  - a light-emitting device,
    - wherein a luminance of said light-emitting device is controlled by obtaining an information signal of an environment.
2. A display system according to claim 1, wherein said information signal comprises a user's living-body information.
3. A display system according to claim 1, wherein said light-emitting device is an EL display device.
4. A display system according to claim 1, wherein said display system is incorporated in one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal computer.
5. A display system comprising:
  - a light-emitting device;
  - a sensor for obtaining an information signal of an environment;
  - a CPU for converting an electrical signal supplied from said sensor into a correction signal; and
  - a voltage changer for controlling a corrected potential based on said correction signal.
6. A display system according to claim 5, wherein said information signal comprises

a user's living-body information.

7. A display system according to claim 5, wherein said light-emitting device, said sensor, said CPU and said voltage changer are formed on a same substrate.

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8. A display system according to claim 5, wherein said light-emitting device is an EL display device.

9. A display system according to claim 5, wherein said display system is incorporated in one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal computer.

10 10. A display system comprising:

an EL element having two electrodes with an EL layer interposed therebetween;  
15 and  
a current control TFT electrically connected to one of said two electrodes of said EL element,

wherein a potential applied to other of said two electrodes of said EL element is controlled based on an information signal of an environment.

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11. A display system according to claim 10, wherein said information signal comprises a user's living-body information.

12. A display system according to claim 10, wherein said display system is incorporated in one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal

computer.

13. An active matrix display device comprising:

at least one pixel thin film transistor over a substrate, said thin film transistor  
5 comprising at least an active layer, and a gate electrode adjacent to said active layer with a  
gate insulating film interposed therebetween;

an EL element comprising at least an EL layer between an anode and a cathode, one  
of said anode and said cathode being electrically connected to said active layer; and

a sensor for obtaining an information signal of an environment,

10 wherein a potential applied to another one of said anode and said cathode is  
controlled based on an information signal of an environment by converting said information  
signal to a corrected potential.

15 14. An active matrix display device according to claim 13, wherein said display  
device and said sensor are formed over a same substrate.

16 15. An active matrix display device according to claim 13, wherein said sensor  
comprises a CCD or a photo-diode.

20 16. An active matrix display device according to claim 13, wherein said information  
signal comprises a user's living-body information.

25 17. An active matrix display device according to claim 13, wherein said display  
device is one selected from the group consisting of a video camera, a digital camera, a head-  
mount display, a car navigation system, a portable telephone, and a personal computer.

18. An active matrix display device comprising:

at least one pixel thin film transistor over a substrate, said thin film transistor comprising at least an active layer, and a gate electrode adjacent to said active layer with a gate insulating film interposed therebetween;

5 an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer; and

a sensor for obtaining an information signal of an environment,

wherein said information signal is converted to a corrected potential and said corrected potential is applied to another one of said anode and said cathode.

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19. An active matrix display device according to claim 18, wherein said display device and said sensor are formed over a same substrate.

15 20. An active matrix display device according to claim 18, wherein said sensor comprises a CCD or a photo-diode.

21. An active matrix display device according to claim 18, wherein said information signal comprises a user's living-body information.

20 22. An active matrix display device according to claim 18, wherein said display device is one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal computer.

23. An active matrix display device comprising:

25 at least one pixel thin film transistor over a substrate, said thin film transistor comprising at least an active layer, and a gate electrode adjacent to said active layer with a

gate insulating film interposed therebetween;

an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer; and

5 a sensor for obtaining an information signal of an environment,

a CPU for converting said information signal to a corrected signal;

a voltage changer for converting said corrected signal to a corrected potential,

wherein said corrected potential is applied to another one of said anode and said cathode.

10 24. An active matrix display device according to claim 23, wherein said display device, said sensor, said CPU, and said voltage changer are formed over a same substrate.

15 25. An active matrix display device according to claim 23, further comprising an A/D converter interposed between said sensor and said CPU, and a D/A converter interposed between said CPU and said voltage changer.

26. An active matrix display device according to claim 23, wherein said sensor comprises a CCD or a photo-diode.

20 27. An active matrix display device according to claim 23, wherein said information signal comprises a user's living-body information.

25 28. An active matrix display device according to claim 23, wherein said display device is one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal computer.

29. An active matrix display device comprising:

at least one pixel thin film transistor over a substrate, said thin film transistor comprising at least an active layer, and a gate electrode adjacent to said active layer with a gate insulating film interposed therebetween;

5 an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer; and

a sensor for obtaining an information signal of an environment,

wherein a potential of another one of said anode and said cathode is controlled by a corrected potential converted from said information signal.

10 30. An active matrix display device according to claim 29, wherein said display device and said sensor are formed over a same substrate.

15 31. An active matrix display device according to claim 29, wherein said sensor comprises a CCD or a photo-diode.

32. An active matrix display device according to claim 29, wherein said information signal comprises a user's living-body information.

20 33. An active matrix display device according to claim 29, wherein said display device is one selected from the group consisting of a video camera, a digital camera, a head-mount display, a car navigation system, a portable telephone, and a personal computer.

34. An active matrix display device comprising:

25 at least one pixel thin film transistor over a substrate, said thin film transistor comprising at least an active layer, and a gate electrode adjacent to said active layer with a

gate insulating film interposed therebetween;

an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer; and

a sensor for obtaining an information signal of an environment,

5 a CPU for converting said information signal to a corrected signal;

a voltage changer for converting said corrected signal to a corrected potential,

wherein a potential of another one of said anode and said cathode is controlled by  
said corrected potential.

10 35. An active matrix display device according to claim 34, wherein said display  
device, said sensor, said CPU, and said voltage changer are formed over a same substrate.

15 36. An active matrix display device according to claim 34, further comprising an A/D  
converter interposed between said sensor and said CPU, and a D/A converter interposed  
between said CPU and said voltage changer.

37. An active matrix display device according to claim 34, wherein said sensor  
comprises a CCD or a photo-diode.

20 38. An active matrix display device according to claim 34, wherein said information  
signal comprises a user's living-body information.

25 39. An active matrix display device according to claim 34, wherein said display  
device is one selected from the group consisting of a video camera, a digital camera, a head-  
mount display, a car navigation system, a portable telephone, and a personal computer.